

CLAIMS:

1. A fusing system comprising:

a stationary heating assembly comprising a thermally self-regulating heating element comprising positive temperature coefficient (PTC) ceramic;

5 a pressure roller proximately positioned relative to the heating assembly so that they form a nip area there between that is configured to receive sheet media;

wherein the heating assembly further comprises a covering exposed to the nip area, the covering being compliant while having a low coefficient of
10 sliding friction.

2. A system as recited in claim 1, wherein the heating assembly is stationary relative to both rotational and translational motion.

15 3. A system as recited in claim 1, wherein the heating assembly further comprises a flexible polyimide film circuit around the PTC ceramic.

4. A system as recited in claim 1, wherein the heating assembly further comprises a flexible polyimide film circuit around and in contact with
20 the PTC ceramic, wherein the film circuit is electrically conductive on the side in contact with the PTC ceramic, but electrically insulating on the other side.

5. A system as recited in claim 1, wherein the heating assembly further comprises an aluminum extrusion housing the PTC ceramic.

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6. A system as recited in claim 1, wherein the covering comprises a compliant elastomer having a surface covered by a friction reducing coating.

7. A system as recited in claim 1, wherein the covering comprises a
5 silicone elastomer.

8. A system as recited in claim 1, wherein the covering comprises a silicone elastomer coated with PTFE.

10 9. A thermal transfer overcoat (TTO) device comprising a fusing system comprising:

a stationary heating assembly comprising a thermally self-regulating heating element comprising positive temperature coefficient (PTC) ceramic;

a pressure roller proximately positioned relative to the heating assembly
15 so that they form a nip area there between that is configured to receive sheet media;

wherein the heating assembly further comprises a covering exposed to the nip area, the covering being compliant while having a low coefficient of sliding friction.

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10. A fusing system comprising a stationary heating assembly comprising a thermally self-regulating heating element.

11. A system as recited in claim 10 further comprising a pressure
25 roller proximately positioned relative to the heating assembly so that they form a nip area there between that is configured to receive sheet media.

12. A system as recited in claim 10, wherein the heating assembly further comprises a compliant elastomer covering that has a low coefficient of sliding friction.

5 13. A system as recited in claim 10, wherein the heating assembly is stationary relative to both rotational and translational motion.

14. A system as recited in claim 10, wherein the thermally self-regulating heating element is comprised of positive temperature coefficient
10 (PTC) ceramic.

15. A system as recited in claim 10, wherein the covering comprises a silicone elastomer coated with PTFE.

15 16. A thermal transfer overcoat (TTO) device comprising a fusing system comprising a stationary heating assembly comprising a thermally self-regulating heating element.

17. A system as recited in claim 14, wherein the heating assembly
20 further comprises a flexible polyimide film circuit around the PTC ceramic.

18. A system as recited in claim 14, wherein the heating assembly further comprises a flexible polyimide film circuit around the PTC ceramic, wherein the film circuit is electrically conductive on the side in contact with the
25 PTC ceramic, but electrically insulating on the other side.

19. A thermal transfer overcoat (TTO) device comprising:
a fusing system comprising:

a stationary heating assembly comprising a thermally self-regulating heating element composed of positive temperature coefficient (PTC) ceramic;

a pressure roller proximately positioned relative to the heating assembly so that they form a nip area there between that is configured to receive sheet media;

wherein the heating assembly further comprises a compliant elastomer covering that has a low coefficient of sliding friction;

a paper feed mechanism configured to feed paper into the nip area;

a TTO film supply roller configured to supply TTO film to the nip area.

20. A TTO device as recited in claim 19, wherein the heating assembly is stationary relative to both rotational and translational motion.

21. A circuitry for a thermal transfer overcoat (TTO) device comprising:

an AC power supply;

5 a paper sensor switch configured to close and complete a circuit with the AC power supply when it senses paper in the TTO device, wherein the completion of a circuit supplies AC power to a fuser system that is configured to heat when power is supplied;

a temperature sensor switch in proximity to the fuser system configured to close when the fuser system has reached a defined operating temperature;

10 a motor configured to receive AC power when both sensor switches are closed and to pull paper through the fuser system.

You might want to consider adding a means plus function claim set and a method claim set.

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